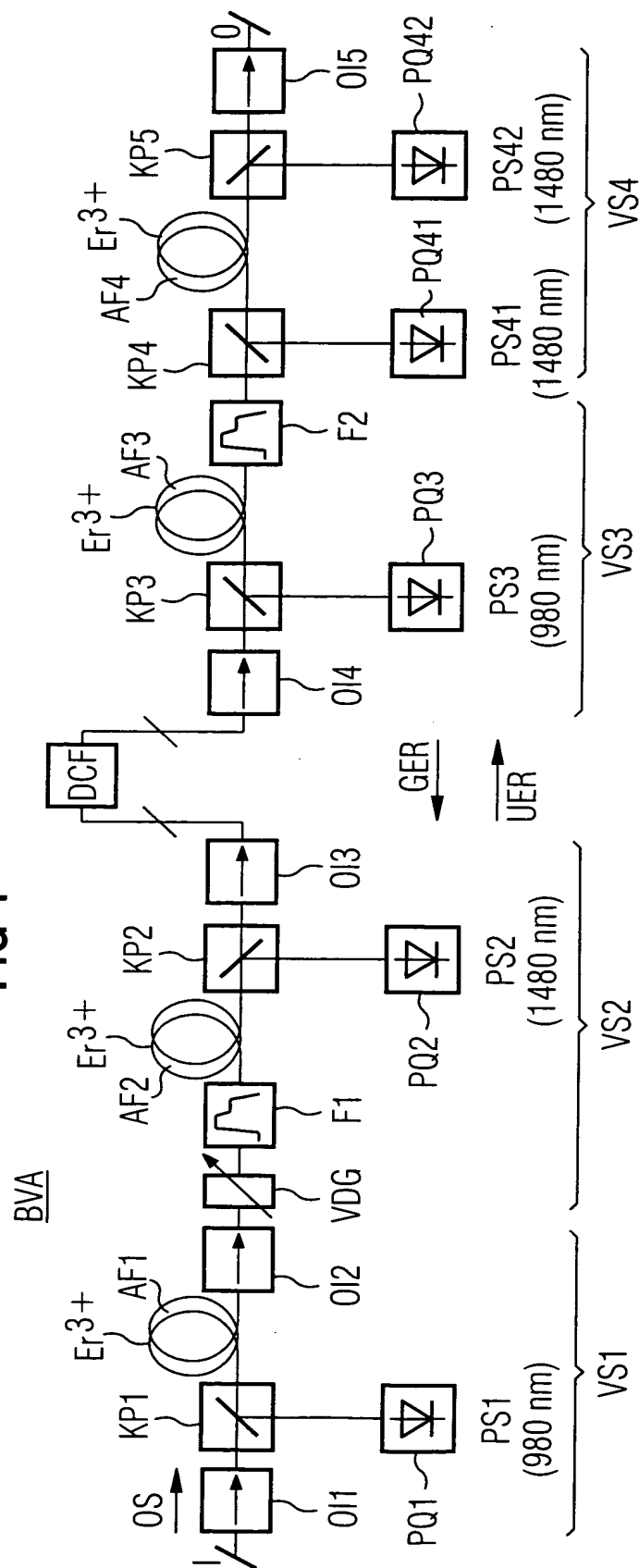


FIG 1



The diagram illustrates the HVS1 device structure. It features a vertical stack of layers. At the top, there is an AF (antiferromagnetic) layer and an  $\text{Er}^{3+}$  ion layer. Below these is the EKP1 (epitaxial layer). The central part of the device is the EKP2 (epitaxial layer). At the bottom, there are two photoresist layers: PSQ2 (photoresist) and PSQ1 (photoresist). The device is labeled HVS1.

The diagram illustrates the optical setup for the experiment. A laser beam, labeled 'I', enters from the left and passes through a filter 'F'. It then reaches a beam splitter 'EKP3'. The beam is split into two paths. The left path goes through a lens 'PS1' and a photodiode 'PSQ1'. The right path goes through a lens 'PS2' and a photodiode 'PSQ2'. The beam is then reflected by a mirror 'AF' and passes through a beam splitter 'EKP4'. The beam is split again into two paths. The left path goes through a lens 'PS3' and a photodiode 'PSQ3'. The right path goes through a lens 'PS4' and a photodiode 'PSQ4'. The setup is labeled 'HVS2' and includes a 'Yb<sup>3+</sup>/Er<sup>3+</sup>' laser source.